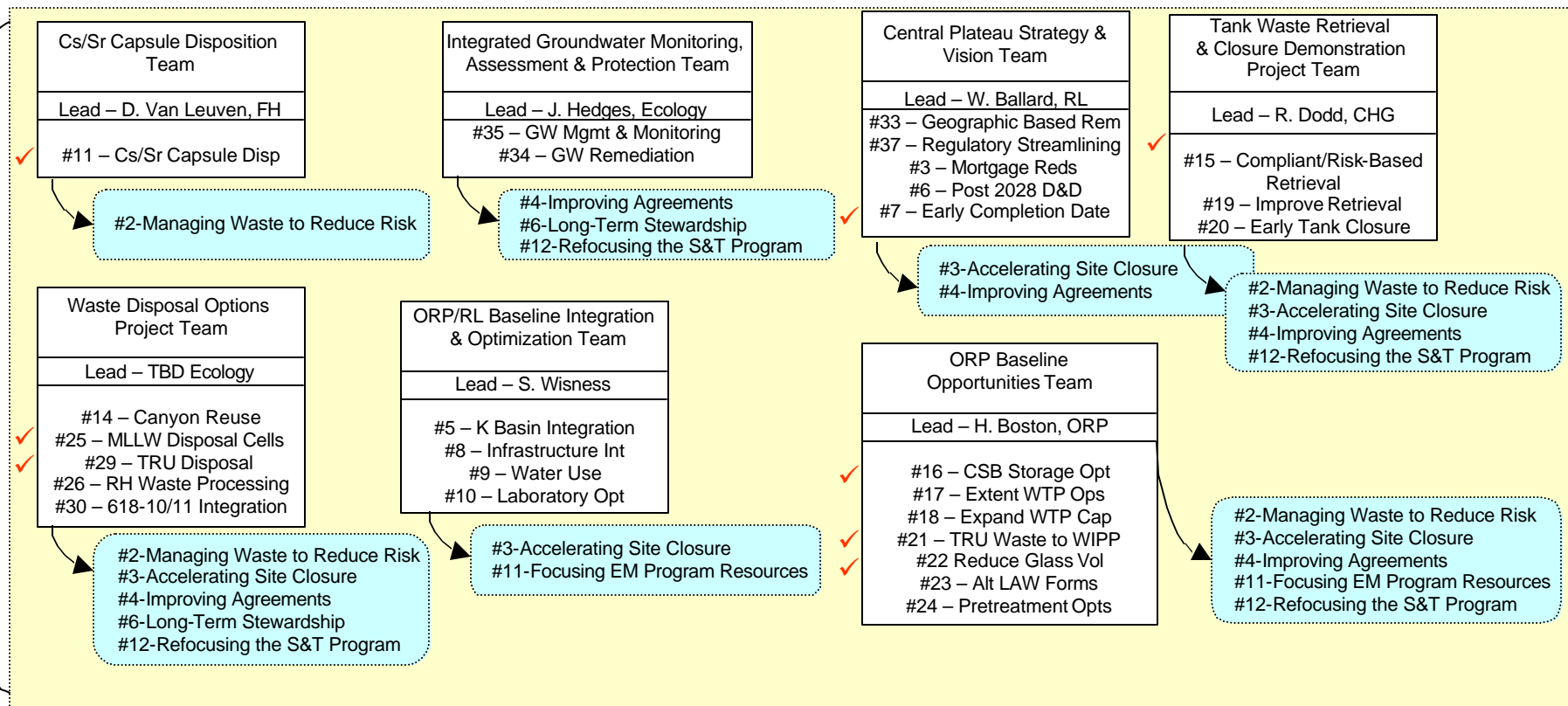


# Hanford's Targets of Opportunity are Closely Aligned with Top-to-Bottom Issues

## Action Teams



## Existing Process in Place

#	Title	Existing Process	Relevant Top-to-Bottom Issues
1	Alt Canyon Disposition	U-Plant ROD Scheduled for 9/02	#4-Improving Agreements
2	Final Reactor Disposition	TPA Milestone for Evaluation of Alternative Disposition Plans – 9/02	#4-Improving Agreements/#6-Long-Term Stewardship
4	Monolithic Hot Cell Removal	ASTD Project underway to evaluate this option	#12-Refocusing the S&T Program
12	FFTF Green Fuel Disposition	PFP has assessment underway to evaluate this option	#2-Managing Waste to Reduce Risk/#5-Safeguards & Security
✓ 13	PFP De-inventory	PFP is working with HQ to evaluate options	#3-Accelerating Site Closure/#5-Safeguards & Security
27	TRU Super Compaction	WM has technology evaluation underway	#10-Packaging & Transportation to Support Risk Reduction
28	Rail Shipment to WIPP	WM is evaluating alternative transportation options with WIPP	#10-Packaging & Transportation to Support Risk Reduction
31	Large Scale Barriers	Will be developed as part of existing decision process in future	#2-Managing Waste to Reduce Risk/#3-Accelerating Site Closure
32	200 Area Characterization	Covered under 200 AIP and associated TPA negotiations	#3-Acc Site Closure/#4-Improving Agreements/#11-Focus EM Resources
38	300 Area Regulatory Approach	Covered under 300 AIP and associated TPA negotiations	#4-Improving Agreements/#8-Implementing NEPA
39	300 Area Lab Replacement	RL is evaluating options as part of the River Corridor RFP	#4-Improving Agreements/#8-Implementing NEPA
40	300 Area Nuclear Safety	To be worked as part of the C3T Subgroup 3	#7-Breakthrough Business Processes/#11-Focus EM Resources
41	10 CFR 830 Implementation		
✓ 42	Requirements Reductions	Contractor Strategies to be worked as part of the C#T Subgroup 4	#1-Performance-Based Contracting
36	Contractor Consolidation		

✓ Indicates where HQ Involvement is likely needed

ID #	Action Team	Target of Opportunity	Baseline Assumptions	Possible Options	Top-to-Bottom Issues
* Targets of opportunity referenced here have undergone varied degrees of discussion and consultation. This listing does not imply agreement on all opportunities by					
1	Existing Process	Alternative Canyon Disposition (Canyon Disposal Initiative (CDI) options, etc.)	Baseline has Canyons not being used for future WM missions and being collapsed on their footprint and a barrier installed.	Enhance waste management mission and in place disposition, complete D&D, demolition to slab, cover with an environmental cap, etc.	#4-Improving Agreements
2	Existing Process	Final Reactor Disposition	One Piece Removal is assumed - While EIS ROD allows up to 75 yrs before removal, current baselines have actions being implemented beginning in 2015 and continuing until 2023.	Delay disposition; periodically assess new technologies. Timing for when, as well as how, disposition is to accomplished (e.g. direct D&D, delayed D&D, etc.).	#4-Improving Agreements #6-Long-Term Stewardship
3	Central Plateau Strategy & Vision Team	Accelerated Facility Deactivation, Decontamination, Decommissioning and Demolition (PFP, 324/327, other Surplus Facilities )	PFP D&D to be completed by 2016. 324/327 D&D to be completed by 2010 per 300 ACP.	Schedule acceleration for a number of large, key facilities, thus eliminating costly mortgage and S&M costs.	#3-Accelerating Site Closure
4	Existing Process	Monolithic Removal of Hot Cells	324/327 hot cells are to be decontaminated and then disassembled/demolished as part of the D&D operations.	Potential cost savings, dose reduction, secondary waste minimization, and schedule acceleration for D&D of 324/327. Monolithic removal involves the one-piece removal of entire cells and appropriate bulk disposal and/or treatment on the central plateau.	#12-Refocusing the S&T Program
5	ORP/RL Baseline Integration & Optimization Team	K-Basin Deactivation and Ancillary Facility D&D Integration/Overlap	SNF Project completes deactivation through scabbling the walls of the basin and then transitions the basins to the River Corridor contractor for final D&D.	Work to more closely integrate final deactivation with the D&D activities. Either deactivate the basins as part of Reactor ISS and the River Corridor contract or accelerate the complete demolition as part of the SNF Project.	#3-Accelerating Site Closure
6	Central Plateau Strategy & Vision Team	Post 2028 Facility Deactivation/D&D	Current Baseline assumes tank waste treatment is completed in 2028 followed by storage of waste, shipment of waste to repository, and final facility D&D, which is all completed by 2046.	Look to accelerate final facility D&D to reduce site mortgage costs - with the objective to get more rapidly accomplish facility D&D activities.	#3-Accelerating Site Closure
7	Central Plateau Strategy & Vision Team	Early Site Cleanup (say by 2035) to reduce support costs	Current Baseline assumes tank waste treatment is completed in 2028 followed by storage of waste, shipment of waste to repository, and final facility D&D, which is all completed by 2046.	In addition to accelerating final site D&D look to accelerate tank waste treatment and closure actions and accelerate shipment of waste off-site in order to further accelerate the final closure date.	#3-Accelerating Site Closure

8 ORP/RL Baseline Integration & Optimization Team	Infrastructure and Site Services Optimization	Landlord Master Plans define infrastructure requirements. Service Level Agreements and Interface Control Documents in place for services requested by projects. Services and upgrades reflect decreasing needs as projects wrap up. Current baseline funding has this effort relatively level over the entire cleanup life-cycle.	Work to more rapidly reduce the need and costs for site services and infrastructure as cleanup actions are completed.	#11-Focusing EM Program Resources
9 ORP/RL Baseline Integration & Optimization Team	200 Area Water Use and Population - Environmental Impacts	Population projections in the 200 Area are based on RL and ORP estimates - without consideration for any target reductions.	Consider building into the baseline reduced population targets for the central plateau - this will result in reduced site services and infrastructure as well as the environmental benefit of reducing water use on the Plateau.	#11-Focusing EM Program Resources
10 ORP/RL Baseline Integration & Optimization Team	Laboratory Optimization (HLW, Plutonium and Remote Handled, Hot Cell/Glove Box capability) [e.g. 222-S Laboratories]	Analyses and support of high-activity samples is done at 325, 222-S (through 2035), WTP (beginning late 2006). Low-activity analyses is done at WSCF. WSCF operational through 2046.	Eliminate the need for WTP lab to analyze and archive tank core samples, or add additional capabilities to the WTP lab, or other optimization scheme amongst all the Labs.	#11-Focusing EM Program Resources
11 Cs/Sr Capsule Disposition Team	Cs/Sr Capsule Disposition	Vitrify capsules in WTP Phase II starting 2017. Treat as RCRA Waste.	1) Phase I instead of Phase II vitrification, 2) Direct disposal in the HLW repository, 3) Dry Cask Storage in CSB or on a pad, 4) Dispose in CDI canyon (e.g. PUREX), and 5) Dispose in the Burial Grounds in a concrete-lined trench	#2-Managing Waste to Reduce Risk
12 Existing Process	FFTF unirradiated Fuel Direct Disposition	Disassemble unirradiated fuel assemblies and repackage in 3013 canisters.	Once possible option is to pack the fuel as is (without disassembly) into alternative canisters/casks and ship material off-site.	#2-Managing Waste to Reduce Risk #5-Safeguards & Security
13 Existing Process	PFP De-Inventory	Current Baseline assumes PFP won't ship Pu off-site until after 2010 when SRS is ready to receive - thus impacting the date for final D&D of the storage vaults.	A number of options are currently being considered for consolidation and early inventory removal to reduce potential threats.	#3-Accelerating Site Closure #5-Safeguards & Security
14 Waste Disposal Options Project Team	Canyon Reuse	Baseline has Canyons not being used for future WM missions (beyond T Plant) and being collapsed on their footprint and a barrier installed.	It might be possible to use the canyons to provide the M-91 Capabilities as well as a waste storage or disposal cell for certain types of wastes.	#2-Managing Waste to Reduce Risk

15	ORP Baseline Opportunities Team	Mixed Waste Compliant Risk Based Tank Waste Retrieval	Baseline assumes 99% Retrieval for every tank.	Establish tank specific retrieval and closure standards. Use as a means to establish performance standards for retrieval sequencing, retrieval performance and ultimately tank closure.	#2-Managing Waste to Reduce Risk #4-Improving Agreements
16	ORP Baseline Opportunities Team	Just in time storage for immobilized waste and ship to repository (don't build storage for entire inventory).	Baseline assumes 6 new 6 cell CSB like buildings for storage of high level glass logs.	Build a minimum lag storage capability and obtain priority for shipment to the Repository - this may be very difficult due to a number of external factors.	#11-Focusing EM Program Resources
17	ORP Baseline Opportunities Team	Run Phase I WTP longer than planned (e.g. to design life) to accommodate more waste.	In the baseline after 2018 the Phase I plant is no longer used.	Run Phase I beyond 2018 (40 year design life).	#3-Accelerating Site Closure #11-Focusing EM Program Resources
18	ORP Baseline Opportunities Team	Expand Capability of WTP to handle the entire HLW fraction by 2028 (Try to remove the need for a Phase 2 plant)	Baseline was developed under the notion that the phase 1 plant was a demonstration.	A number of options are currently being considered, including higher capacity melters, increased waste loading, increased plant throughput (better operating efficiency), and pretreatment options (including steam reforming, in-tank options, etc.) which remove certain limiting chemicals.	#3-Accelerating Site Closure
19	ORP Baseline Opportunities Team	Waste Retrieval Efficiencies	3 different technologies are assumed for different types of tanks and waste, including two sluicing options and one predominantly mechanical.	Possible economies of scale for equipment common to a tank farm, possible alternative retrieval technologies are being considered.	#12-Refocusing the S&T Program
20	Tank Closure Demonstration Project Team	Early Tank Closure involving operational or interim closure concepts (like reactor ISS)	Closure of tanks do not occur in the baseline until all retrieval is completed.	Early closure will help to establish closure criteria and aid in the integration with surrounding waste sites.	#2-Managing Waste to Reduce Risk #3-Accelerating Site Closure #4-Improving Agreements
21	ORP Baseline Opportunities Team	Send tank waste classified as TRU only to WIPP.	Wastes from Potentially 3 DST's and 5-6 SST's may be applicable for this option. Current plans are for all waste to be vitrified.	Retrieve, treat as RH-TRU, and send to WIPP.	#2-Managing Waste to Reduce Risk
22	ORP Baseline Opportunities Team	Reduced tank waste glass vol	Baseline is that all tank waste will be vitrified, and that the vitrified HLW waste must meet the repository WAC.	Examine technologies and repository WAC to maximize waste loading. Consider alternatives that protect public health and the environment.	#12-Refocusing the S&T Program

23	ORP Baseline Opportunities Team	Immobilize some low activity waste (LAW) in another waste form (not glass)	Current plans are to immobilize all the low activity waste in glass.	Grout, Polymers, and steam reforming are all being considered, provided they do not force near-term processing delays.	#2-Managing Waste to Reduce Risk #4-Improving Agreements #12-Refocusing the S&T Program
24	ORP Baseline Opportunities Team	Separate chemicals from the tank waste and immobilize in a different way so that everything doesn't have to go through WTP - increase waste loading in the LAW	Current flow path does not have a separate step for removing undesirable chemicals from the feed streams.	Removal of undesirable chemicals would significantly enhance waste loading and WTP operations - creates a third waste stream	#12-Refocusing the S&T Program
25	Waste Disposal Options Project Team	Common/Centralized on Site MLLW Disposal	Add a new MLLW disposal trench to trenches 31 & 34 for onsite waste; separate new trench for offsite waste; separate melter (MLLW) disposal trench; separate ILAW (MLLW) disposal facility.	Integrated trench operations for disposal of all MLLW; possible inclusion of LLW in the Mega Trench; ERDF "Hanford Disposal Facility" for all disposable waste.	#2-Managing Waste to Reduce Risk #4-Improving Agreements
26	Waste Disposal Options Project Team	Retrieval and Disposition of Remote Handled Waste (e.g. Centralized size reduction/assay stations)	Baseline plans for retrieval and disposition of RH waste from buried waste sites or facilities will be accomplished on a site-by-site basis.	Look for economy of scale or other collaborative improvements by standardizing approaches and reuse of equipment.	#2-Managing Waste to Reduce Risk
27	Existing Process	TRU super compaction	Current packaging and shipping estimates are based on standard loading of TRUPACs.	Increased compaction could reduce the number of TRU shipments to WIPP.	#10-Packaging & Transportation to Support Risk Reduction
28	Existing Process	Rail Shipments to WIPP	Current baseline assumes truck transportation to WIPP.	Fewer/cheaper shipments may be possible if rail is used.	#10-Packaging & Transportation to Support Risk Reduction
29	Waste Disposal Options Project Team	On-site Disposal of Specific TRU Waste Streams	Retrieve and process all TRU waste. Retrieve ~500 m <sup>3</sup> annually. Process all TRU and suspect TRU waste through WRAP and M-91 facility and package TRU waste for shipment to WIPP. Complete by 2032.	Leave ~8,000 (~10%) older drums in place. Leave ~25 m <sup>3</sup> caisson waste in place. In-place disposal of PUREX tunnel waste.	#2-Managing Waste to Reduce Risk #6-Long-Term Stewardship
30	Waste Disposal Options Project Team	618-10/11 Burial Ground Remediation and Potential Overlap/Gaps with M-91	Baseline assumes excavation and move to Central Plateau for treatment and final packaging.	Optimization of retrieval and treatment can be considered, along with other technology improvements. Options such as one-piece retrieval of the drum units and onsite segregation/packaging should be considered.	#3-Accelerating Site Closure #12-Refocusing the S&T Program

31 Existing Process	Surface Barriers/Large Scale Capping (consistency, Barrier Types, Integration with Tank Closure, technical design assumptions, cost estimates, schedules, etc.)	Baseline estimates assumes that RCRA C barriers will be placed on all waste sites. Estimates do not consider placing "mega barriers" which cover facilities, tank farms, and past practice sites.	Optimization of the type of barriers, along with the concept of large scale capping are potential opportunities.	#2-Managing Waste to Reduce Risk #3-Accelerating Site Closure
32 Existing Process	200 Area Characterization/ Work Plan development	Baseline has costs for 20+ OU's to be investigated in the Central Plateau.	Current plans (discussed in the AIP) are to use an approach similar to the 100 areas focusing the investigations on 12 waste groups.	#3-Accelerating Site Closure #4-Improving Agreements #11-Focusing EM Program Resources
33 Central Plateau Strategy & Vision Team	Geographic based remediation/closure on the Central Plateau (e.g. Streamline Regulatory Framework by Geographic area, common basis for decisions)	Current approach is fragmented closure - following different processes and time lines.	Options available here to streamline processes and decision making - will be tied to the decision roadmap under construction.	#3-Accelerating Site Closure #4-Improving Agreements
34 Integrated Groundwater Monitoring, Assessment & Protection Team	Groundwater Remediation and Access	Current plans assume P&T continues for a number of years followed by a yet to be determined final remedy (for a cost basis ISRM was assumed).	New technologies need to be developed.	#12-Refocusing the S&T Program
35 Integrated Groundwater Monitoring, Assessment & Protection Team	Groundwater Management & Monitoring Optimization	There has always been three distinct groundwater monitoring networks (RCRA, CERCLA, and AEA).	Develop an integrated network satisfying the requirements of all three.	#4-Improving Agreements #6-Long-Term Stewardship
36 Existing Process	Contractor Consolidation	Multiple site prime contractors exist on site at this time.	Future consolidation of contractors on the central plateau could be considered.	#1-Performance Based Contracting
37 Central Plateau Strategy & Vision Team	Regulatory streamlining for final remediation/closure of areas on the Central Plateau (e.g. PUREX/ PUREX tunnels)	Current approach is fragmented closure - following different processes and time lines.	Options available here to streamline processes and decision making - will be tied to the decision roadmap under construction.	#4-Improving Agreements #8-Implementing NEPA
38 Existing Process	RCRA/CERCLA/NEPA Integration in the 300 Area	Current approach is fragmented.	Working to streamline regulatory structure in line with the 300 ACP.	#4-Improving Agreements #8-Implementing NEPA

39 Existing Process	PNNL old 300 Area facilities (labs) replacement	Current plans call for a \$25M replacement facility.	Drop this facility.	#11-Focusing EM Program Resources
40 Existing Process	300 Area Min-Safe/Nuclear Safety Reduction Targets	Current estimates are fragmented on a facility by facility basis.	Streamline using a 300 Area wide approach.	#7-Breakthrough Business Processes
41 Existing Process	10 CFR 830 Implementation	Plans are being developed for full implementation of the new requirements.	Options to streamline plans and ensure appopriateness for facility D&D should be considered.	#7-Breakthrough Business Processes
42 Existing Process	Requirements Reduction (Subgroup 3)	Estimates are based on the current set of requirements.	Efforts are underway to streamline requirements and eliminate redundant or unnecessary requirements.	#7-Breakthrough Business Processes #11-Focusing EM Program Resources